



# International Journal of Infectious Diseases

OFFICIAL PUBLICATION OF THE INTERNATIONAL SOCIETY FOR INFECTIOUS DISEASES

**Editor-in-Chief**  
**D. William Cameron**

Professor of Medicine, Division of Infectious Diseases, University of Ottawa at The Ottawa Hospital  
TOH-General Campus, Box 228, 501 Smyth Road  
Ottawa, Ontario K1H 8L6, Canada

Tel.: +001 613 737 8923; Fax: +001 613 737 8925; email: [ijid.editor@gmail.com](mailto:ijid.editor@gmail.com)

**Corresponding Editors**

**Dr. Timothy Barkham**  
Singapore  
[timothy\\_barkham@ttsh.com.sg](mailto:timothy_barkham@ttsh.com.sg)

**Dr. Sheldon Brown**  
New York, USA  
[Sheldon.brown@med.va.gov](mailto:Sheldon.brown@med.va.gov)

**Dr. J. Peter Donnelly**  
Nijmegen, The Netherlands  
[p.donnelly@usa.net](mailto:p.donnelly@usa.net)

**Dr. Dean Fergusson**  
Ottawa, Canada  
[dafergusson@ohri.ca](mailto:dafergusson@ohri.ca)

**Prof. Maria Guzman**  
Havana, Cuba  
[lupe@ipk.sld.cu](mailto:lupe@ipk.sld.cu)

**Prof. Andy I. M. Hoepelman**  
Utrecht, The Netherlands  
[i.m.hoepelman@umcutrecht.nl](mailto:i.m.hoepelman@umcutrecht.nl)

**Dr. Mark Holodniy**  
California, USA  
[holodniy@stanford.edu](mailto:holodniy@stanford.edu)

**Prof. Meinolf Karthaus**  
Munich, Germany  
[MKarthaus@gmx.de](mailto:MKarthaus@gmx.de)

**Prof. Craig Lee**  
Winnipeg, Canada  
[cllee@ottawahospital.on.ca](mailto:cllee@ottawahospital.on.ca)

**Dr. Ziad A. Memish**  
Riyadh, Saudi Arabia  
[zmemish@uottawa.ca](mailto:zmemish@uottawa.ca)

**Dr. Karamchand Ramotar**  
Georgetown, Guyana  
[karamchand.ramotar@gmail.com](mailto:karamchand.ramotar@gmail.com)

**Dr. Sunit K. Singh**  
Hyderabad, India  
[sunitsingh@ccmb.res.in](mailto:sunitsingh@ccmb.res.in)

**Dr. Vikas Trivedi**  
Meerut, India  
[drvikastrivedi@yahoo.co.in](mailto:drvikastrivedi@yahoo.co.in)

**Dr. Hubert Wong**  
Vancouver, Canada  
[hubert.wong@telus.net](mailto:hubert.wong@telus.net)

**Dr. Jane Zuckerman**  
London, UK  
[j.zuckerman@medsch.ucl.ac.uk](mailto:j.zuckerman@medsch.ucl.ac.uk)

**Editorial Office**

**Annette Fowler**  
Tel.: +44 (0) 1865 843672; Fax: +44 (0) 1865 843992  
[ijid@elsevier.com](mailto:ijid@elsevier.com)

## International Society for Infectious Diseases

**Executive Committee**

Keryn Christiansen (Secretary), Australia  
Jonathan Cohen (Treasurer), UK  
Ron Dagan, Israel  
Raul Isturiz (Past-President), Venezuela  
Adeeba Kamraulzaman, Malaysia

Keith Klugman (President-Elect), USA  
Daniel Lew (President), Switzerland  
Carol Odio, Costa Rica  
Richard Wenzel, USA

**Publications Committee**

D. William Cameron  
Keryn Christiansen  
Raul Isturiz  
Keith Klugman  
Daniel Lew  
Carl-Erik Nord  
Didier Raoult  
Richard Wenzel

**Council**

G. Acuña, Chile  
Z. H. Al-Wahsh, Jordan  
J. Bartlett, USA  
E. Bingen, France  
Z. Bhutta, Pakistan  
N.C. Bodonaik, Jamaica  
P. Cahn, Argentina  
J. Cheng, China  
A. Duse, South Africa  
J. Ena, Spain  
J. Farrar, Vietnam  
B. Gilbert, Australia  
B. Gordts, Belgium  
N. Hanson-Nortey, Ghana  
W. Hryniewicz, Poland  
G. Kouri, Cuba  
V. Krčmery, Slovakia

H.-S. Leu, Taiwan  
C. Marino, Colombia  
F.-X. Mbopi-Keou, Cameroon  
Z. Memish, Saudi Arabia  
E. Nicastrì, Italy  
D. Pittet, Switzerland  
S. Ponce de Leon, Mexico  
R.K. Ratho, India  
M.C. Roy, Canada  
S. Roberts, New Zealand  
R. Salvino, The Philippines  
A. Shibl, Egypt  
Y. Suputtamongkol, Thailand  
J. Torres, Venezuela  
C. Wendt, Germany  
S. Wey, Brazil

**Editorial Advisory Board**

Awa Aidara-Kane, Senegal  
Keryn Christiansen, Australia  
Eduardo Gotuzzo, Peru  
King K. Holmes, USA  
Raúl Isturiz, Venezuela  
T. Jacob John, India  
Davy Koech, Kenya  
Shigeru Kohno, Japan  
Keith Klugman, USA  
Vladimír Krčmery, Slovak Republic  
Philippe Lepage, Belgium  
Andrew Lever, UK  
Andrew Onderdonk, USA  
Samuel Ponce de Leon, Mexico  
Didier Raoult, France  
Rino Rappuoli, Italy  
Jae-Hoon Song, Republic of Korea  
Tania Sorrell, Australia  
Thelma Tupasi-Ramos, Philippines

Officers of the ISID may be reached  
at the Society's headquarters by  
Fax: +1 617-278-9113